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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,712	10/24/2003	Mark Spong	03-617	9804

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EXAMINER

MCCLOUD, RENATA D

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/692,712

Applicant(s)

SPONG ET AL.

Examiner

Renata McCloud

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 22-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 22-35 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 07/24/2006.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Laletin (US 20030151453) in view of Skibinski et al (US 5990654).

**Claims 1,2:** Laletin teaches a method comprising: obtaining compensator current and compensator voltage measurements (fig. 1:50); receiving a pulsed drive signal (Fig. 1:A; fig. 2A); generating compensator reference values (fig. 1:60); and controllably adjusting a compensator current source and a compensator voltage source in response to the compensator current and compensator voltage measurements and the compensator reference values in order to modify the motor drive signal, thereby providing a compensator motor drive signal (par. 0022). Laletin does not teach a motor. Skibinski et al teach a motor (19) controlled by a pwm controller (9) . It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Laletin to drive a motor as taught by Skibinski et al in order to control the power to the motor.

**Claim 3:** Laletin teaches the step of generating compensator reference values comprises generating a reference current waveform and a reference voltage waveform (fig. 1: 60).

**Claim 4:** Laletin teaches the reference current waveform and a reference voltage waveform is determined in part by characteristic line impedance and a propagation delay parameter (par. 0058,0060). Skibinski et al teach the reference current waveform and a reference voltage waveform are determined in part by a characteristic line impedance and a propagation delay parameter (col. 2:47-51)

**Claim 5:** Laletin teaches the characteristic line impedance is estimated in response to material properties of a transmission line (par. 0058,0060). Skibinski et al teach the characteristic line impedance is estimated in response to material properties of a transmission line (col. 2:47-51).

**Claim 6:** the propagation delay parameter is estimated in response to material properties of a transmission line (par. 0058,0060). Skibinski et al teach the propagation delay parameter is estimated in response to material properties of a transmission line (col. 3:42-50).

**Claim 7:** Laletin teaches the propagation delay parameter is estimated in response to propagation delay measurements (par. 0058,0060). Skibinski et al teach the propagation delay parameter is estimated in response to propagation delay measurements (col. 3:42-50).

**Claim 8:** Laletin teaches the reference current waveform and the reference voltage waveforms are continuous-time signals (par.0003).

**Claim 9:** Laletin teaches the reference current waveform and the reference voltage waveforms are discrete-time signals (par. 0003).

**Claim 10:** Laletin teaches the reference current waveform and the reference voltage waveforms are stored in a memory device (par. 0062).

**Claim 11:** Laletin teaches the step of obtaining compensator current and compensator voltage measurements comprises measuring a compensator input voltage and compensator output current (fig. 1:50).

**Claim 12:** Laletin teaches the measurements are analog signals (par 0022;0063).

**Claim 13:** Laletin teaches the measurements are discrete time signals (par. 0022)

**Claim 14:** Laletin teaches the compensator current source is a parallel active filter and the compensator voltage source is a series active filter (fig. 1:20).

**Claim 15:** Laletin teaches the parallel active filter and series active filter are controlled by a pulse controller (par. 0023)

**Claim 16:** Laletin teaches the pulse controller is a pulse width modulation controller (0023).

**Claim 17:** Laletin teaches the step of controllably adjusting a compensator current source and a compensator voltage source comprises using the compensator current and compensator voltage measurements and the compensator reference values to compute waveform error signals and controllably adjusting the compensator current source and the compensator voltage source in response to the waveform error signal (par. 0023).

**Claim 18:** Laletin teaches step of controllably adjusting a compensator current source and a compensator voltage source is performed by a microcontroller (0005).

**Claim 19:** Laletin teaches the step of controllably adjusting a compensator current source and a compensator voltage source is performed using analog controllers (0005).

4. Claims 20,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laletin in view of Skibinski et al as applied to claim 2 above, and further in view of Erdman (US 5526252.

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**Claim 20:** Laletin and Skibinski et al teach the limitations of claim 19. Referring to claim 20 they do not teach the controllers are propositional integral derivative (PID) controllers. Erdman teaches propositional integral derivative (PID) controllers (fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Laletin and Skibinski et al to use a PID controller as taught by Erdman et al in order to control the power to the motor.

**Claim 21:** Laletin and Skibinski et al teach the limitations of claim 19. Referring to claim 21, they do not teach the controllers are propositional integral (PI) controllers. Erdman teaches propositional integral (PI) controllers (fig. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Laletin and Skibinski et al to use a PI controller as taught by Erdman et al in order to control the power to the motor.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (571) 272-2069. The examiner can normally be reached on Mon.- Fri. from 5:30 am - 2pm.

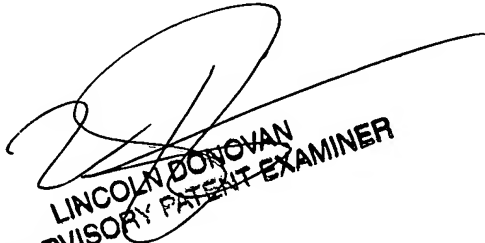
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Renata McCloud  
Examiner  
Art Unit 2837

rdm



LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER